



U.S. Army Aviation & Missile Command

Army Aviation Component Tracking Program

The Army Maintenance Management System – Aviation

Presented to:
The Unique Item Tracking Committee
(TAMMS-A)

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TAMMS-A For Safety



Component lifecycle linked to aircraft utilization, shelf life or events

- Critical safety items serialized to ID source, document acceptance date
- Maintenance intervals managed through TAMMS-A tracking system
- Finite Life items removed before failure ("RC" code)
- Time Change items overhauled on schedule ("TC" code)
- Condition Change items included in the program as required by PM or AMRDEC ("CC")





Cradle to Grave Tracking



ACQUISITION / TECH

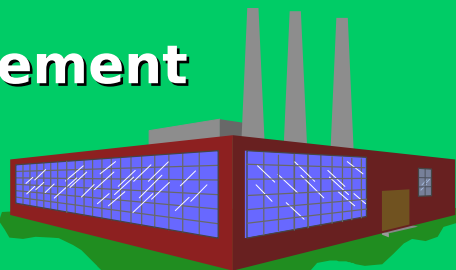
DATA

New Procurement

CDRL

DID

DD 250 Verification



**COMPONENT
PERFORMANCE**



Field
Installation/Removal

13 Million
Records

2410

2.7 Million
Tracked Parts

REPAIR EFFECTIVENESS
(Field - National)



Organic/Contractor

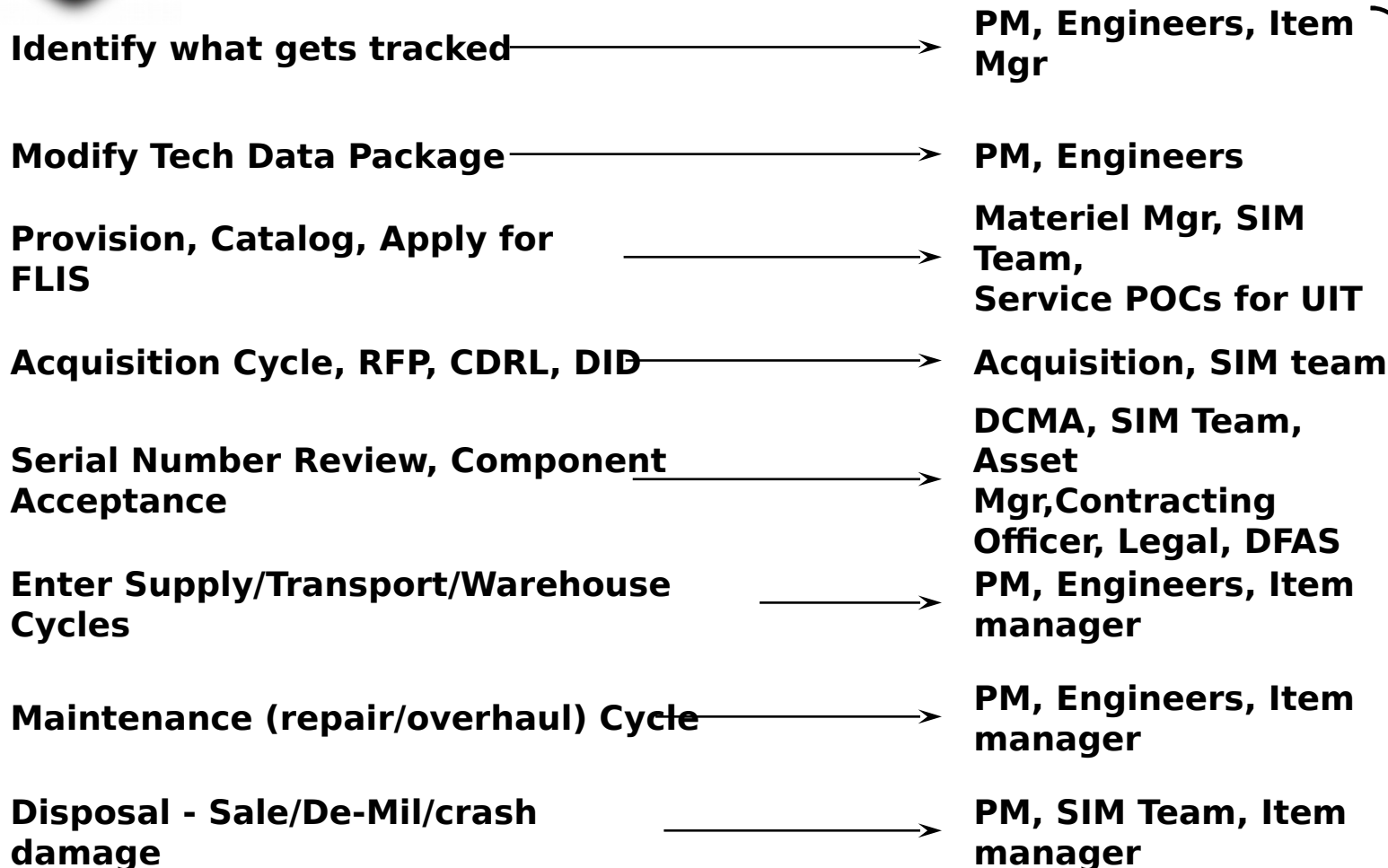
DISPOSAL

Remove
from
Inventory





TAMMS-A Stakeholders Serialization Process



Lifecycle
Acquisition O&S
Cost

DCMA - Defense Contract Management Agency
DFAS- Defense Finance Accounting Service
SIM - Serialized Item Management

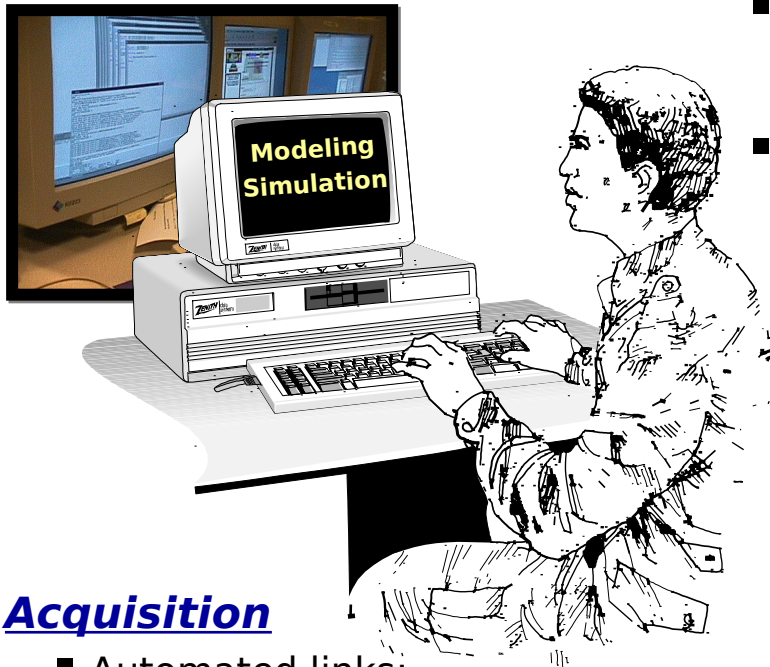




Core Process Initiatives

Database

- 30% Electronic
- 2.5 Million Unique Items



Acquisition

- Automated links:
 - Contract lot to Serial #
 - EPDM links planned
- Block Workload increases along with accuracy

Field Installation/Removal

- AMATS demo/deployment with AIT feed
- Virtual Aircraft



Wholesale

- Automate CCAD - DLMD Backbone
 - Reduce CCAD overhead paperwork requirements
 - Improve 2410 accuracy
 - Monitor recap mandatory items
 - Improve build record accuracy, future parts availability
- Link to process analysis data collection system & development capabilities
- Joint Service Contractor Reporting Sikorsky
- Integration of AIT field/wholesale
 - RF Tag
 - Memory Button
 - Bar Code



Serialized Item Management

Based on a

TAMMS-A

"Backbone" to

Integrate

AIT Enabled



ePDM



**GCSS-A
LMP**



Data
Quality



Data
Transmission

The Army Maintenance Management System Aviation

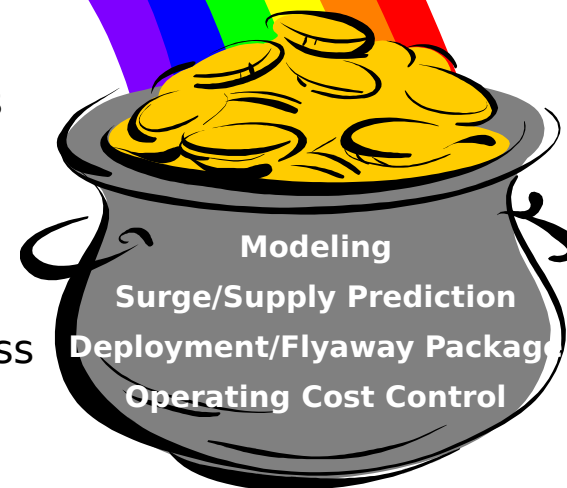
Used today for:

- SOF
- Failure Mode Analysis
- Component Life/Age Studies
- Configuration Status/Studies
- Source of Supply/Repair Analysis
- Recap & Overhaul Improvement
- Data Reconstruction in excess of \$20M/yr

TAMMS-A

*Designed for Safe Operation
Manages:*

- ✓ Maintenance Schedules
- ✓ Component Removal
- ✓ \$40 + Billion in Assets
- ✓ Over 10,000 actions/wk





Back-Up

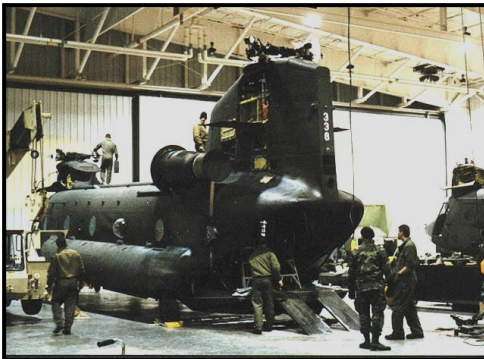




Aviation Issues



- **Component cycle driven by finite life, maintenance interval and flying hour program may not fit standard requirements modeling**
- **Difficulty in predicting arrival of various components at depot can increase difficulty of configuration management**
- **Funding requirement changes for supply driven by maintenance concept change is difficult**





Modeling ARMY TRANSFORMATION-



TODAY

- ~~Reduced Footprint, System Recap, Improved~~
- **Virtual Aircraft utilizes TAMMS-A Records to link serialized component performance with aircraft tail numbers, producing aircraft specific requirements**
- **Models use Component performance profiles and “flight of these virtual aircraft”**
- **Manual process can take weeks to analyze an aircraft data comes from many sources**

CONSTRAINTS

- Data availability, access procedures and quality vary greatly

ARDSS Tool

- Automates access to varied data sources
- Provides screening capability for raw data
- Provides decision tools to analysts for ranking induction/distribution

AT LAST Model

- Flies a single aircraft, unit or entire fleet to analyze component demand
- Models age, configuration and optempo to ID predicted failures
- Used to optimize recap decisions, review planned spares requirements
- Expanded to evaluate deployment requirements - tailored deployment

Tailor

**Deployment
Package**

**Air
Land
d
Sea**

ISSUE: what is incorporated into ERP solution, what stays at each MSC as a bridge or unique?



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AT-LAST MODEL. . .



Life Cycle Fleet Management Tool – looks at each aircraft tail by tail.

models effect of component life / age, maintenance and supply cycle time
on system cost and reliability

Utilized to Predict Expected Component

- For Recapitalization
- For Requirements Identification
- For Pre- Deployment Support
- For Optimization of Deployment Resources

- ✓ ***Maintenance before deployment***
- ✓ ***Identify timing of requirements***
- ✓ ***Prioritize land, sea, air transport***

Predictive
Readiness
Model

How?

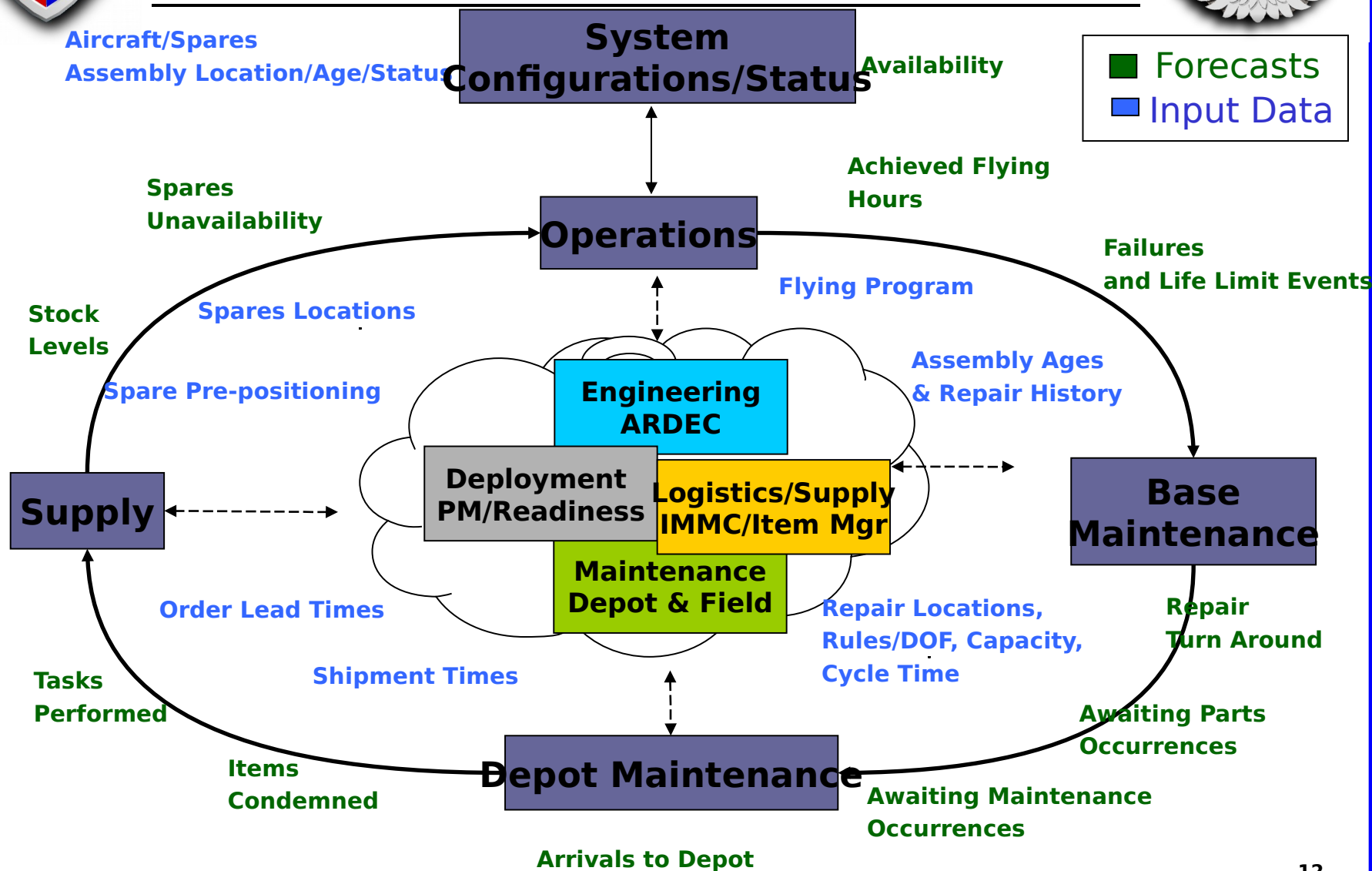
Input: JACE, 2410, ARDSS

Model: Virtual Aircraft with existing log system

Output: Monte Carlo simulation in aging obsolescence. Distribution Played



AT-LAST Closed Loop Model





Data Definitions



SAS_var	SAS_Type	SAS_Len	Var_Description	ORACLE var	Unique	Type	Len
PN	Char	32	Part Number of the Component	PN	N	VCh2	32
SN	Char	20	Component Serial Number	SN	N	VCh2	20
COPY	Char	1	DA Form 2410 Copy Number	COPY	N	Char	1
NHA_SN	Char	20	NHA Serial Number	NHA_SN	N	VCh2	20
INIT_DT	Num	8	DA Form 2410 Date (Date of Action)	DATE_2410	N	Date	
WUC	Char	14	Work Unit Code i.e. 05A01B02	WUC	N	VCh2	14
EI_SN	Char	7	End Item SN (Aircraft Tail Number)	EI_SN	N	Char	7
NHA_PN	Char	32	NHA Part Number	NHA_PN	N	VCh2	32
CAGE	Char	5	Manufacturers Contractor and Government Entity Code	CAGE		Char	5
RCODE	Char	1	Reason Gain/Loss Code COPY=2/3 DA PAM 738-751 Table #1-13	CD_EQUIP_GAIN/LOSS		Char	1
FCODE	Char	3	Failure Code DA PAM 738-751 Table#1-2(REF_DA2410_FAILURES)	CD_FAIL		Char	3
IACT_CD	Char	1	Inspection and Action Code DA PAM 738-751 ***Build LOOKUP TABLE	CD_INSPECT_ACTION		Char	1
CN2410	Char	6	DA Form 2410 Control Number	CN2410		Char	6
PROC_DT	Num	8	MCDS Processing Date	DATE_CREATED		Date	
NHA_HRS/ NHA_OPHR	Num	8	NHA_HRS for all components NHA is AC component and NHA_OPHR for NHA T-700 Components	NHA_HRS		Num	5
NOVH	Num	8	Number of Previous Overhauls	NOVH		Num	2
TSLI	Num	8	Time Since Last Installation	TSLI		Num	5
TSN/CUM_HR	Num	8	Time Since New + T700 Engine former CUM_HRS	TSN		Num	5
TSO	Num	8	Time Since Last Overhaul	TSO		Num	5
UIC	Char	6	Unit Identification Code of Original Receipt (perform the action)	UIC		VCh2	6



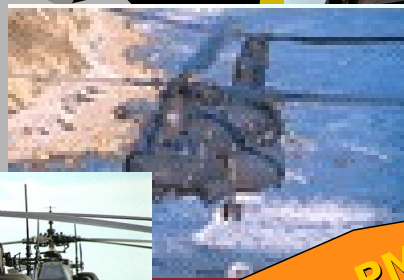
Joint Service



ELITE Extensions



Other
data
exchanges
within
H-60



2410 to other PM's



Extension to Navy process
and infrastructure

